



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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January 11, 2011

Thomas M. Pors  
Law Office of Thomas M. Pors  
1700 Seventh Avenue  
Suite 2100  
Seattle, WA 98101

**RE: Tentative Determination of Extent and Validity Tall Chief Golf Course Claims**

Dear Mr. Pors:

Per your request I have prepared that attached document to summarize my analysis of the evidence supporting the extent and validity of two claims to vested water rights filed by the Tall Chief Golf Course during the first opening of the claims registry in the early 1970's (G1-25318CL and G1-26873CL). A third claim filed by Tall Chief Golf Course in the 1998 registry opening (G1-30166CL) appears to duplicate the earlier claims.

The analysis that I supply summarizes the tentative determination of extent and validity that was performed as part my investigations of the applications for change (CG1-25318CL and CG1-26873CL) which were filed in 2008 by Ames Lake Water Association (ALWA).

Subsequent to completing my investigation of the two change applications, ALWA, through your office, requested that our work the applications be suspended as a result of the district gaining an alternative source to supply expansion of its service area.

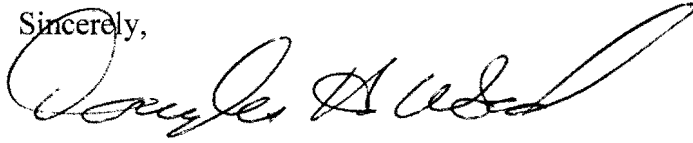
ALWA has since finalized access to the alternative supply and seeks now to have the Department of Ecology (Ecology) withdraw it applications for change. The district however requests, that prior to withdrawal of the two change applications, Ecology provide a written account of its analysis of the extent and validity of the claims.

Please convey to your clients that my analysis is not a formal evaluation, and even as a tentative evaluation it represents our opinions at the time the investigation was made. Any formal evaluation of the priority, extent, and validity must be made by a Superior Court Judge through the adjudication procedures as outlined in RCW 90.03.105 through 90.03.245, RCW 90.03.610 through 90.03.645, and RCW 90.44.220.

Thomas M. Pors  
January 11, 2011  
Page 2 of 2

If you have any questions, please contact me at 425.649.7077 or at [Doug.Wood@ecy.wa.gov](mailto:Doug.Wood@ecy.wa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Douglas H. Wood". The signature is fluid and cursive, with a large loop at the end.

Douglas H. Wood, M.S., LHG  
Water Resources Hydrogeologist

dh/mc

Enclosure: Tall Chief Golf Course Water Right Claims Summary

## **Background**

The Tall Chief Golf Course occupies lands first settled in the 1880's and used for cattle and dairy farming from the 1890's until the mid 1960's. During the 1960's the property was re-developed as a golf course and has remained so since that time.

In 2006 Ames Lake Water Association (ALWA), with permission from the directors of Tall Chief Golf Inc., filed applications CG1-126873CL and CG1-125318CL with the Department Ecology seeking to change the purpose of use, place of use, season of use, and add new points of withdrawal. The changes were intended to allow redevelopment of portions of the property from recreational use to housing.

In 2008 ALWA requested that the change applications be withdrawn from active consideration when an alternative source of water was obtained for the housing development. Prior to this request the NWRO office of the Water Resources Program had essentially completed its examination of the proposed change, including an investigation into the extent and validity of the claims.

The purpose of this document is to provide a summary of the investigation by Water Resources staff regarding the extent and validity of claims G1-126873CL and G1-125318CL. Please note that these determinations are tentative and represent the opinion of Water Resources staff at the time of the investigation. A full determination of the extent and validity of these claims to vested rights can only be made by a Superior Court judge through the water right adjudication process as provided in RCW 90.03.105 through 90.03.245, RCW 90.03.620 through 90.03.645, and RCW 90.44.220.

## **Investigation**

Whenever Ecology investigates an application for change, a tentative determination is made of the extent and validity of that right (Policy 1120). In the case of a change involving a claim to vested water right it is necessary first to establish whether water use began prior to the passage of the Water Code. For surface water right claims, this means that use must have begun prior to 1917 and for groundwater claims, prior to 1945. Together with an analysis of whether the right was either abandoned or relinquished, this part of the investigation evaluates the validity of the claim and is provided here in the subsequent section on the history of water use.

The evaluation of the extent of the water right looks into the quantities beneficially used in developing the water right. With claims to a vested water right, it is necessary to determine the scope of the original project since the usual investigation accompanying an application for a permit to develop the right is not part of the record. In addition to determining the original scope of the vested right, it is necessary to look at whether past and present usage conform so that a maximum quantity can be determined and the potential for partial relinquishment may be established (or not).

## **History of Water Use**

The first European settlement in the Fall City area was at Fort Patterson in the 1850's. Fort Patterson was located at the confluence of Patterson Creek and the Snoqualmie River at a point that appears to have been approximately 1/8 mile (~650 feet) east of the present boundary of the Tall Chief Golf Course property.

Land Survey records dating from 1884 describe the land along the northern boundary of the NE1/4 of Section 5 as having first rate soils and that the west bank of the Snoqualmie River was at that time at the boundary between sections 4 and 5. The 1884 survey map shows that, south of the north edge of Township 24N, the river bank cuts through a small portion of section 5 before trending east into section 4. This places a portion of the NE1/4 of section 5 on the bank of Snoqualmie River in the late 1800's. Today the river bank lies entirely within section 4 in this area.

Land records dating to the 1880's were researched by ALWA consultant Robert Pancoast. These records reveal that the land now occupied by the Tall Chief Golf Course in Section 5, T24N, R7E was originally part of the Railroad Land Grant of 1864 to the Northern Pacific Railroad.

The land covered by the claim, specifically the East 1/2 of the Northeast 1/4 of Section 5, Township 24 North, Range 7 East, Willamette Meridian, began to be developed between approximately 1883 and 1890 when the land was sold by the Union Pacific Railroad to two families that had earlier homesteaded adjacent lands in Sec. 32, T25N, R7E (Peter Peterson, granted in 1883) and in Sec. 4, T24N, R7E (Otto Hogonson, granted in 1893).

The NE1/4 of Section 5, T24N, R7E was developed beginning in May 1883 when the N1/2 of the NE1/4 were sold by the railroad to Peter Peterson, owner of the homestead land immediately north of the section boundary in the S1/2 of SE1/4 of Section 32, T25N, R7E. Peterson then sold this land to James W. Bush, a pioneer who had homesteaded in the Issaquah valley in 1864.

Between 1884 and 1924 the Peterson land was bought and sold several times until purchased in 1924 by James Profit whose family farmed on this land until late 1950's (Figures 1 and 2). In 1957 the property was sold by the Profit's to Clyde and Beulah Davis who deeded it to the developer of the Tall Chief Golf Course in 1979. Air photo evidence indicates the property was growing crops in 1965 (Figure 3), but was being developed as part of the golf course by 1971 (Figure 4). Other air photos show that in 1981 (Figure 5) and 1993 (Figure 6) the area was part of the golf course (Figure 1).

Otto Hogonson settled on the west bank of the Snoqualmie River in the mid or late 1880's in Section 4. He patented Government Lots 5, 6, and 7 of section 4, totaling 25.2 acres, in January 1890 under the Homestead Act. The Hogonson family farmed the South 1/2 of the NE 1/4 of Sec. 5 until 1945 when they deeded the property to Earl and Anna Twigg. The Twigg family sold their farm in 1962 to Frank Avant, the developer of the Tall Chief Golf Course.

Early irrigation of the site is evident from historical records of dairy farming dating from the late 1880's. The property is adjacent to the Snoqualmie River and a perennially filled oxbow lake, either or both of which likely supplied irrigation water prior to and possibly after 1945.

The Twigg family is reported to have replaced surface water sources with wells in the spring of 1945 (Avant affidavits). It is unclear if irrigation was fully accomplished using groundwater prior to the conversion of the property from agricultural to recreational use in the 1960's.

Air photos of the area taken in 1965 shows that the Twigg property had been partially converted to golf course use by that time (Figure 3). The Profit (Davis) property was still being used to grow crops in 1965. The 1965 photo also shows that the entrance to the golf course was from the county road adjacent to the oxbow lake, which connects directly west to the clubhouse (originally the Twigg residence). The 1971 air photo (Figure 4) shows the golf course entrance road had been moved to its current location approximately 1/2 way into the Profit (Davis) property. The 1971 photo also shows that trees were planted where the original entrance road had been. The original entrance road is preserved today as a tree-lined raised path used by golf carts. Cloud cover on the date of the 1971 photos makes it difficult to determine whether the golf course had been completed. The next available air photos are dated 1981 and these clearly show that the golf course is completed over what had been both the Profit and Twigg properties.

Affidavits signed by Frank and Anne Avant and dated August 6, 1998 state that they developed the Tall Chief Golf Course in two phases beginning in 1965 with the first nine holes located in the western portion of the Hogonson/Twigg property. The second phase involved the construction of an additional nine holes on both the Hogonson/Twigg and Profit/Davis properties. The Avant affidavits assert that the second phase was begun in 1967.

Springs drain the lower slopes of Tolt Hill in the western portion of the Tall Chief Golf Course property. An orchard, adjacent to the likely location of these springs, can be seen in 1940's vintage aerial photography of the area (Figures 1 and 2). The probable location of a spring, situated approximately 50 yards northwest of where the Profit home was located was visited in October 2008. Although all spring collection equipment has been removed, evidence remains that the spring was developed during the past.

### **Extent of Water Use**

The quantities available for transfer under claims G1-126873CL and G1-125318CL are limited to those quantities that were established and vested through beneficial use for the purposes of agricultural activities performed on the properties that are now occupied by the Tall Chief Golf Course.

Agricultural water rights holders have not traditionally kept records of water use in this area of the state. The only source of actual water use are records collected by the Tall Chief Golf Course since 2003 and submitted with applications for change CG1-126873CL and CG1-125318CL. It is however possible to estimate usage for the original agricultural purposes if it is assumed that farmers now use the same quantities to grow crops as was the custom when the property was originally developed as farm land.

Historical records indicate that the alluvial plain of the Snoqualmie River Valley was fully cleared and developed for agricultural purposes by the turn of the 20th century. Land transactions and census records show that the parts of the Tall Chief property that occupy the alluvial plain were in agricultural use beginning in the 1880's and had been completely developed by the 1920's.

Aerial photography from 1942 was used by the US Army to produce orthophoto maps of the Fall City area. These maps clearly show cultivated fields occupying the northwestern portion of what is now the Tall Chief Golf Course property. Land records indicate that at that time these cultivated areas were owned by James Profit and Earl Twigg (Figure 1).

The 1942 orthomap was imported into ArcGIS, modified to fit known geographical landmarks (georeferenced), irrigated areas were outlined based on crop pattern, and then irrigated acreage calculated using the XTools utility (Figure 2). The resulting calculated irrigated area is 51.36 acres, 24.11 acres of which were irrigated by Twigg and 27.25 acres by Profit.

Using the Washington Irrigation guide for a crop of hay/pasture annual irrigation requirement would be 14.32 inches/acre at an average efficiency of 75% (19.09 inches/acre total usage), giving a likely annual water duty of 81.7 acre-feet. Factoring in return flows at 15% gives total consumptive use of 69.5 afy. The total transferable consumptive use for irrigation purposes utilized prior to the enactment of the Groundwater Code (RCW 90.44) in 1945 was likely therefore to have been approximately 69.5 afy.

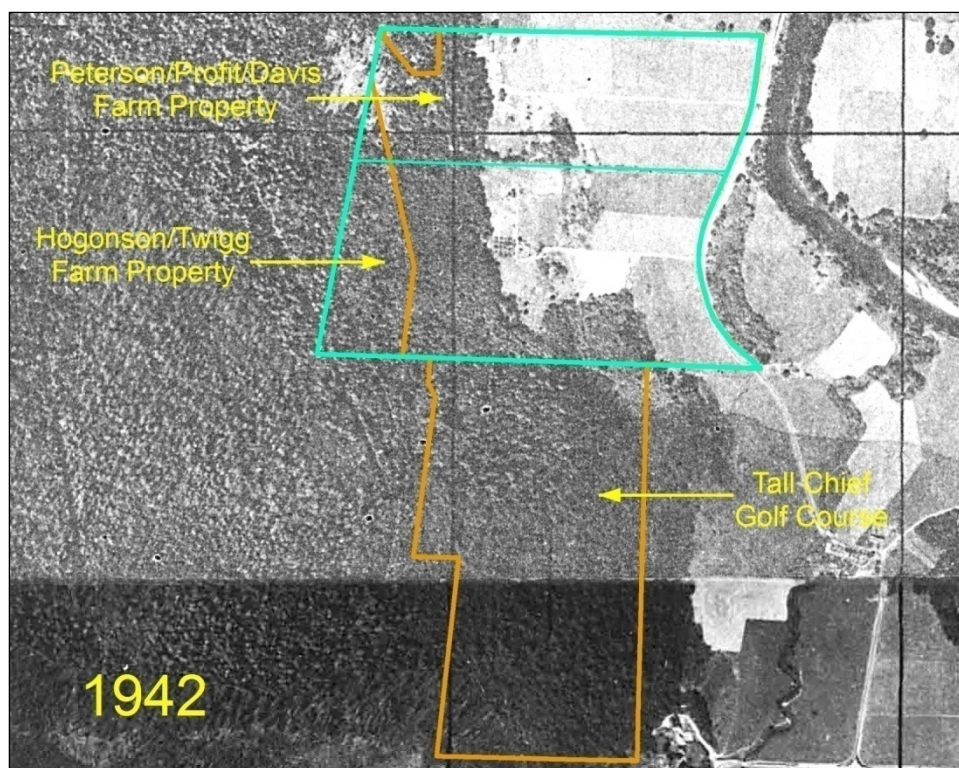


Figure 1: Air photos of the Tall Chief site dated 1942.  
(Note the different shades of grey for cultivated and irrigated farmland.)

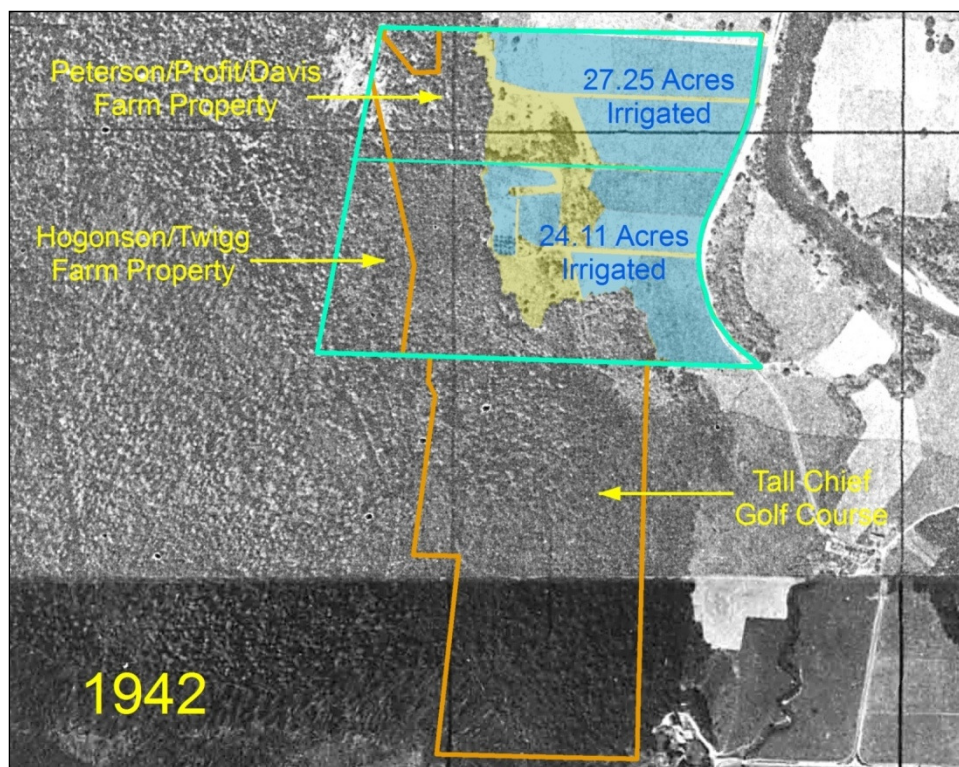


Figure 2: Irrigated areas highlighted on the 1942 air photo  
(Calculation of irrigated acreage done using ArcGIS).

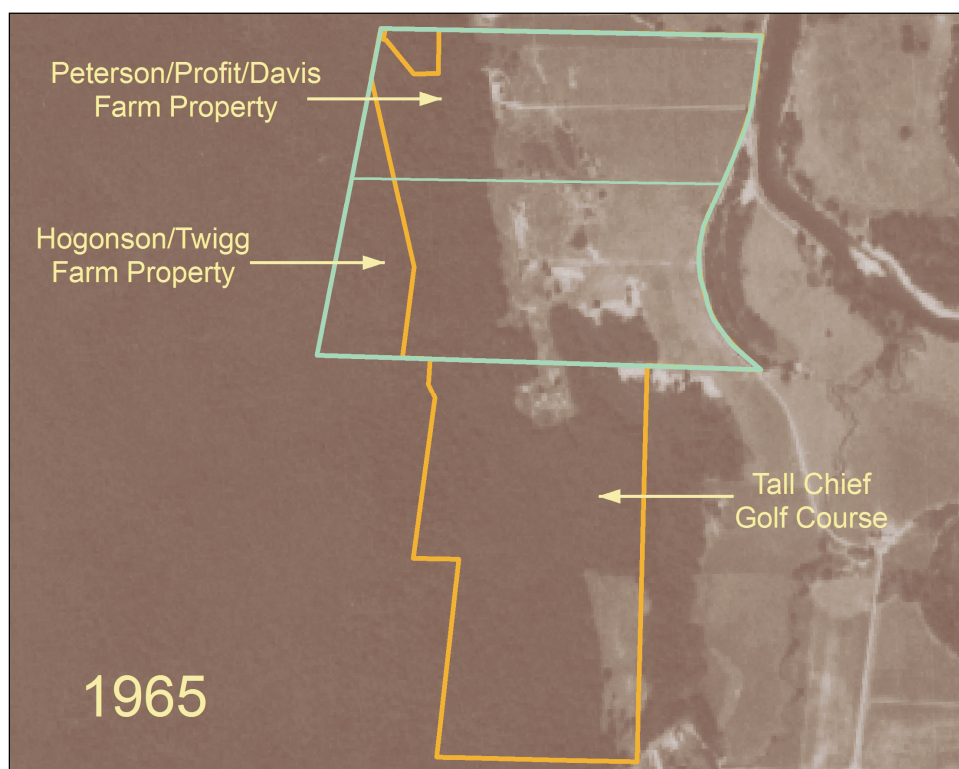


Figure 3: Air photo dated 1965. Note that golf course is being constructed on the Twigg property.

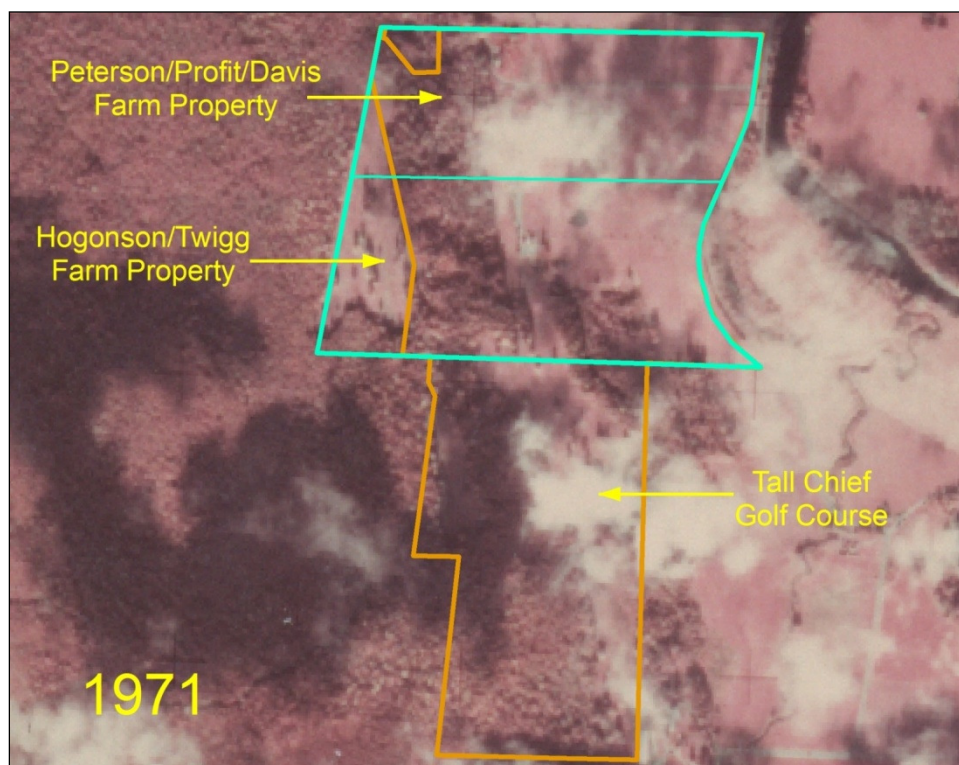


Figure 4: Air photo dated 1971 of the Tall Chief property. Although clouds obscure much detail it can be seen that the entrance road to the golf course is located on the former Profit property.

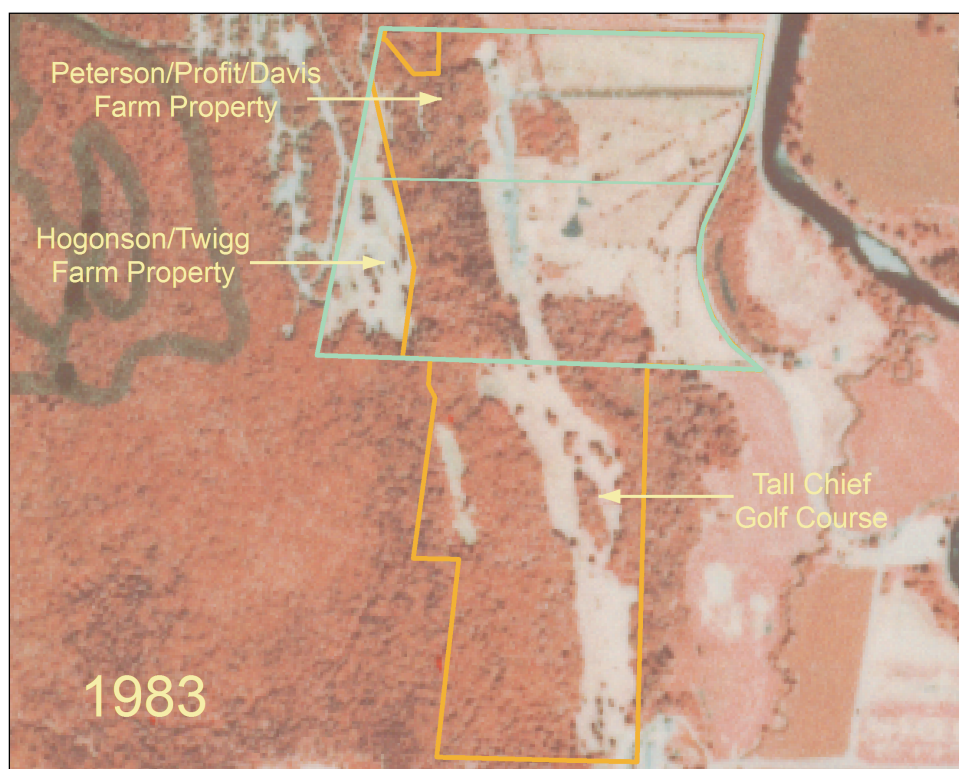


Figure 5: Air photo dated 1983 of the Tall Chief site.  
(The golf Course had been completed by this date)

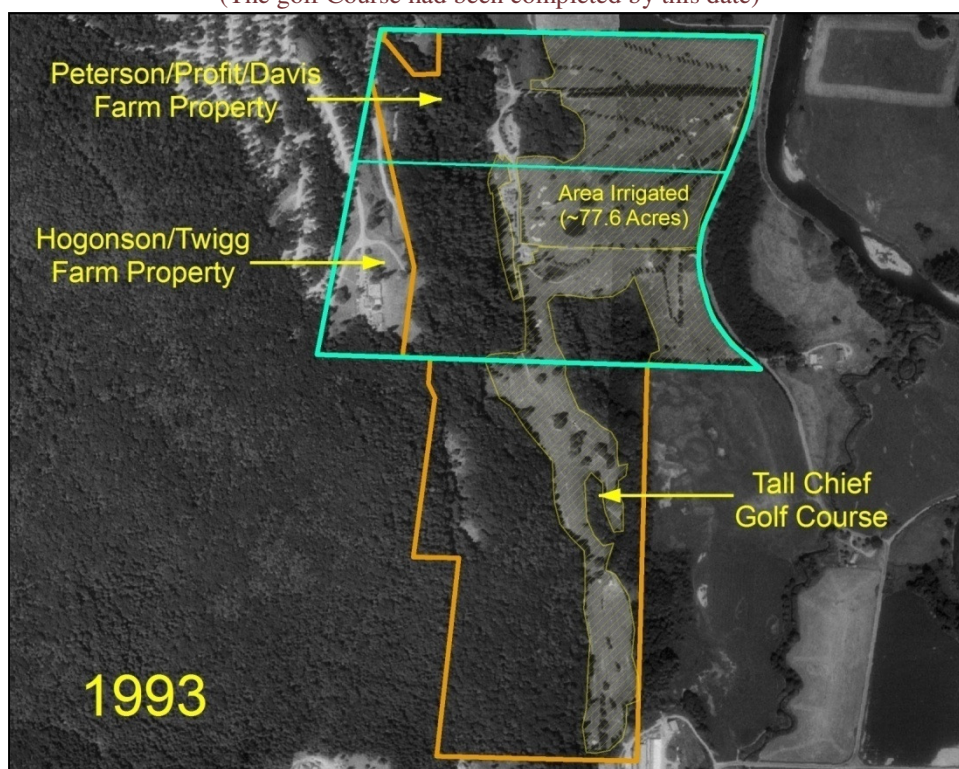


Figure 6: Air photo of the Tall Chief site dated 1993.  
(No additional changes are seen from 1983 photo.)

The instantaneous quantity (Qi) of 200 gpm asserted under claim G1-126873CL, while comparable to similar golf course and agricultural irrigation operations of similar acreage is not supported by materials supplied by the applicant. The applicant provides evidence that actual pumping rates for golf course irrigation are 100 gpm. The proposed change for G1-126873CL is for 150 gpm. The amount that can be transferred is limited to what can be demonstrated, thus approval of a transfer to G1-126873CL would be limited to 100 gpm.

ALWA provided golf course irrigation use data for the years 2003 to 2005 (Table 1) which states that annual use ranged from 69.7 to 95.1 afy. A portion of excess quantities above 81.7 afy, while not established under the claim for irrigation, has been established through historical use for stockwatering. Since stockwatering was at least in part perfected with those quantities asserted as vested under claim G1-125318CL, the amount of excess irrigation that can be tied to stockwatering would be considered under an application for change to claim G1-125318CL.

<b>Table 1: Tall Chief Golf Course Irrigation use 2003 to 2005</b>		
<b>Year</b>	<b>Gallons</b>	<b>Acre-Feet</b>
2003	30,988,404	95.1
2004	23,937,551	73.5
2005	22,700,409	69.7
<b>Maximum</b>	<b>30,988,404</b>	<b>95.1</b>

<b>Table 2: Tall Chief Domestic Use 2003 to 2005</b>		
<b>Year</b>	<b>Gallons</b>	<b>Acre-Feet</b>
2003	599,580	1.8
2004	628,750	1.9
2005	429,210	1.3
<b>Max. (Cal. Year)</b>		<b>1.9</b>
<b>Max. (12 mo.)</b>		<b>2.2</b>

<b>Table 3: Estimated Stockwatering Use 1910 to 1962</b>		
<b>Farm Owner</b>	<b>Head of Cattle</b>	<b>Acre-Feet</b>
Hogson/Twigg	60	0.81
Profit	60	0.81
<b>Maximum</b>	<b>120</b>	<b>1.62</b>

<b>Table 4: Estimated Irrigation Use 1910 to 1962</b>		
<b>Farm Owner</b>	<b>Acres Irrigated</b>	<b>Acre-Feet</b>
Hogonson/Twigg	24.11	38.4
Profitt	27.25	43.4
<b>Total</b>	<b>51.36</b>	<b>81.7</b>
<b>Less 15% return</b>		<b>69.5</b>

Two claims cover water use on the Tall Chief Golf Course (G1-126873CL and G1-125318CL). A third claim (G1-301661CL) was filed 1998 that also references irrigation quantities already covered under the 1974 irrigation claim (G1-126873CL). The stockwatering and domestic quantities used at Tall Chief Golf Course are the subject of claim number G1-125318CL.

ALWA supplied information on water usage for both the Hogonson and Profit farm properties. Pancoast (2007) suggests that usage for the Profit farm was 30.92 afy for the irrigation of 26 acres, and for the Hogonson farm, estimates of irrigation use are 20.4 to 35.6 afy. Adding these gives between 51.3 and 66.5 afy, similar to the quantities derived through Ecology's GIS analysis and the Washington Irrigation Guide (Table 4).

Claim G1-125318CL was filed in 1973 by the Tall Chief Golf Course for 200 gpm and 320 afy for the purpose of irrigation of 220 acres. Two points of withdrawal associated with the irrigation claim are described as Well 2 and Well 3 in documents supplied by the applicant and in Ecology Well logs.

Ecology estimates stockwatering uses for the Profit and Hogonson farms at approximately 1.62 afy based on 12 gpd per head of cattle, and 0.67 afy for domestic use based on 300 gpd per household. This proves a total of 2.3 afy for both farms. Recent use for the golf course club house (2003 to 2005) documents a maximum of 2.2 afy for domestic purposes during a 12 month period between May 2003 and April 2004.

Irrigation of the golf course fairways and greens (Table 1) exceeds the total estimated use for the two farm properties by 13.4 afy (95.1 afy less 81.7 afy that can be considered vested through agricultural irrigation use). The excess irrigation (less return flows) can be, in part, construed as use of the portion of the domestic and stockwatering quantities claimed under G1-125318CL. This would account for the difference between the historical farm domestic and stockwatering use of 2.3 afy and the current clubhouse maximum use of 2.2 afy.

The two wells used to irrigate the present golf course are located in the flood plain of the Snoqualmie River approximately half-way between the West Snoqualmie River Road and the base of the slope of Tolt hill. Water that is pumped from these wells is stored in ponds on the fairways, and from there distributed to sprinklers located on golf course fairways and greens.

### **Tentative Findings**

The evidence reviewed supports a finding that the two claims (G1-26873CL and G1-25318CL) represent continuous beneficial usage of water on the site beginning in the late 1880 from adjacent riparian sources (Snoqualmie River and oxbow lake) and from springs located along the west edge of the alluvial plain of the Snoqualmie River. Groundwater sources utilized since the 1940's are directly connected to the Snoqualmie River and thus do not in reality represent exploitation of a separate source. Differences in the timing of impacts would remain relevant to an analysis of the potential for impairment.

*Tall Chief Golf Course Vested Water Right Claims (G1-126873CL & G1-125318CL)*

The extent and validity of the two Tall Chief Golf Course claims were tentatively determined to be as follows:

<b>Claim</b>	<b>First Use</b>	<b>Qi</b>	<b>Qa</b>	<b>Acres</b>	<b>Season</b>
G1-126873CL	Pre-1917 Surface and Pre-1945 Groundwater	100 gpm	81.7 afy (69.5 afy consumptive*)	51.36	Irrigation Season
G1-125318CL	Pre-1917 Surface and Pre-1945 Groundwater	25 gpm	2.2 afy	N/A	All Year

\* Irrigation quantities include return flows that contribute to flows of the Snoqualmie River, and to the availability of water used under other water rights, both junior and senior. Any future changes that result in moving the source of the irrigation quantities from the alluvial aquifer would necessitated a reduction in quantities to account for these return flows (see RCW 90.03.380 sec. 1).

The extent and validity analysis presented here is tentative, and represents what Ecology staff had determined were the transferable quantities under these two claims through a change application as of the end of 2008. Both of these claims are subject to relinquishment as provided in RCW 90.14. A full determination of the extent and validity of a water right or claim can only be made by Superior Court judge through the water right adjudication process as provided in RCW 90.03.105 through 90.03.245, RCW 90.03.620 through 90.03.645, and RCW 90.44.220.